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LECTURES.

BOSTON CITY HOSPITAL: CLINICAL LECTURE NO. XII.

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Spina Bifida. — GENTLEMEN : Our first patient to-day is the infant child shown you on Friday last, at which time, on account of the great risk involved, we concluded that it would be best not to do anything surgically. Meanwhile, however, the parents have expressed such an earnest desire that I would undertake some means of relief that I have consented to make the attempt. We have here an infant three months of age, strong, vigorous, and healthy, but having at the lower end of the spine a peculiar tumor of soft and fluctuating character. This condition is probably what is known as spina bifida, and due to non-union of the lower portion of the spinal column. You may perhaps think this lack of development is not found elsewhere, but in the front of the head we sometimes see open sutures, and in consequence a hydrocephalus; secondly, meningocele occurs when the sutures at the back of the head fail to close, and the brain hangs out in a shape similar to that of the "waterfall" worn by women. The same failure of development may be seen in the back of the neck, and in various portions of the spine lower down. But we oftenest see it here, where the lumbar vertebræ fail to coalesce. This tumor is of course due to dilatation of the membranes of the spinal cord, and incloses the terminating fibres, the cauda equina. Hence if we cut it open and attempt to remove it we are in danger of destroying some of these fibres. The fluid which fills the tumor is the cerebro-spinal fluid. If we draw it off the tumor will fill again; if we repeat the operation the sac may refill, and so on without limit. Not long ago we had in the hospital a boy with a gun-shot wound of the spine, which discharged the cerebro-spinal fluid in such quantities that bedclothing and mattress were drenched, and the boy died from exhaustion and spinal irritation. Now, the question is, Can we safely meddle with this tumor? Some time since a child which had spina bifida, with an opening leading up into the spinal canal, was brought into the hospital for treatment. The sac was ruptured in birth, a few hours before. We could do nothing more than close the opening with plaster and compress, and the child died in forty-eight hours. Another question is, Can we do any good by injecting a stimulating fluid into the sac, as in hydrocele? Perhaps. But the procedure is liable to be followed by meningitis; still, this is what I propose to do. The strength of the injection will be only four drops of the tincture of iodine to one drachm of water, the fluid is therefore very mild. In hydrocele we should use a tincture of iodine of the full officinal strength. After injecting the fluid we shall apply pressure and watch the child carefully.

In some cases repeated tappings have been followed by shrinking of the sac. I aspirate the tumor, and you see the clear cerebro-spinal fluid, three drachms in quantity, which we will save for chemical and microscopical examination. I now inject into the sac one half drachm of water, which contains two drops of the tincture of iodine. We shall next apply compression as well as we can in this locality, which in children is an awkward place for such an application. To me this is a case of great interest, for I have never before done the operation, and as I said before I do it now only at the earnest solicitation of the parents. A certain number of cases of spina bifida recover. I have myself seen one or two such instances. Some years ago, in the dispensary, I had as a patient a little girl whose chest it was necessary to examine. After her clothing had been removed I noticed over the sacrum a peculiar, puckered scar into which I could put my finger. I found that the arches of the vertebræ had not united. The child was born thus, and had a large tumor. At four years of age she fell and ruptured the sac, in consequence of which she was very sick for a fortnight. Pus formed, and an abscess followed, but healed, and the child recovered with no loss of power in the limbs. The tumor was in a favorable location, namely, at the lower end of the spine, and contained only the fibres of the cauda equina.

The other day the parents of this child were told by parties outside the hospital that it would never grow, or if it did it would be good for nothing. But I remember having seen a case at maturity in very good condition. The individual had spina bifida, with a tumor as large as a child's head hanging away from the body, but supported by elastic bands, and doing well. Dr. Thorndike mentions a similar case, but these, of course, are exceptions. Commonly, the tumor continues to enlarge, the patient loses power in the legs, some slight accident sets up a cerebro-spinal meningitis, and the child dies. Statistics show that many cases die from the effects of operation. Some, however, recover, either spontaneously or as a result of a stimulating injection. But our case is an unfavorable one for operation. The child is strong, is nursed by the mother, and so has good food, but the tumor has no neck, and is connected with the spinal cavity by means of a large opening, and therefore inflammation can easily run up the spinal canal. We cannot remove the tumor, nor do anything else than what has been done. In some cases pedunculated tumors have been removed by ligature, which caused them to slough off. We have, then, only three modes of operation: First, tapping. Secondly, constant pressure, which in so young a child it is almost impossible to apply. In a child five or six years old, however, who is able to control the sphincters, we might apply a pad and elastic bandage, and the treatment would have fair promise. Thirdly, we may inject iodine, as has been done in this case, after drawing off a portion of the fluid in the tumor, and the result may be good. If moderate inflammation be excited and the tumor do not disappear at the end of a week, I shall repeat the operation. Dr. Thorndike suggests that painting the tumor with collodion will aid in the shrinking, which we hope will take place. Now if the case go badly and inflammation extend up the spine, there will be twitching of the limbs and convulsions, and probably the inflammation will rush up the meninges (the delicate membranes which line the spinal canal and the cerebral cavities) with the same intensity as in the development of peritonitis, in which the inflammation is so rapid that it spreads like a blush upon the cheek. We then should have cerebro-spinal meningitis. If the child be alive to-morrow it will probably do well.

In a small proportion of cases hydrocephalus and meningocele have both been successfully treated by tapping.

[Eighteen hours after the operation the child was seized with convulsions, followed by comatose symptoms and death. It seems probable that fatal result was due to alteration of pressure in the ventricles and at the base of the brain by drawing off the cerebro-spinal fluid. Eighteen hours would seem to be too short a period for the full development of meningitis from two drops of iodine. Bryant and Gross both speak favorably of trying the tapping and injecting treatment. More recently the *London Medical Times and Gazette*, February 2, 1878, publishes a discussion on the cases of Mr. Gould, treated by tapping and injecting iodo-glycerine into the sac. Out of fifteen cases twelve are reported as successful. One child of eighteen months of age was tapped and injected five times, and finally recovered. On one occasion two and one half ounces of fluid were withdrawn with safety. It is claimed that the iodine dissolved in glycerine, being heavy, remains at the bottom of the sac, and does not spread up the canal.]

Compound Fractures of the Arm. — You have frequently seen this boy in the wards, and I bring him before you merely to exhibit the condition of his arm. On the 29th of December, while sliding down the banisters of a tenement house, the boy fell into the well of the building, and struck upon his elbow. The result was two compound fractures: one over the elbow-joint, the other in the fore-arm near the wrist. The case looked bad. At the wrist there was a simple fracture of the radius and a compound fracture of the ulna, which bone had protruded through the wound. It was thought if we took out the crushed bones where the compound fracture existed at the elbow, that in the end the case would probably come to amputation. But the patient has done well, and is still improving. The bone is firmly united at the wrist, and the shape is very good. At the elbow it will be seen that the openings have nearly healed and that the motion is quite satisfactory. The end of the humerus was sawn off, and the fracture reduced, the operation being done after the Lister method. To-day my probe does not penetrate the opening, which seems entirely closed. We will therefore dispense with the antiseptic dressing and spray. At the time of the operation the question was seriously agitated as to whether it were safe to leave the articular ends of the olecranon and radius, they not being injured. It is a general feeling that articulating surfaces, if left, will not do well, because of their liability to ulceration. But here we did leave the hook of the olecranon and the head of the radius, and the case has recovered favorably. It is exceptional, for in my experience this is the only case which, where articulating surfaces were suffered to remain, has done well. There is in the ward a patient with similar conditions who is not progressing at all. In such cases I think the best way is to saw off the ends of both the articulating bones and also all articulating surfaces. How much of our success in this case is due to the antiseptic treatment I cannot say. There was some suppuration, but the treatment kept the wound clean. One advantage of this dressing is that but little pus forms, so that frequent dressing of the wound is not required. In the case, for example, of removal of a tumor from the axilla, four days since, there has as yet been only one re-dressing. In the ordinary dressing we must open the part at least once every day, and this of course disturbs the wound and retards progress.

Syphilitic Tumor of the Breast. — This colored man, already seen by some of you, has a swelling in the right breast. In the male a tumor in this locality is unusual. The left breast is soft; the right is hard and nodulated. The breast itself can be pinched up, so that the tumor seems to be underneath and independent of it. Enlarged breasts are rarer in the white than in the colored race, in whom, indeed, the breast has been known to develop to such an extent that it secreted milk as freely as the female gland.[1] I have put this man under specific treatment because of the syphilis which was evident one year ago. At that time he also had here and there tumors which probably were gummy. This enlargement on the chest varies in size from week to week, now smaller, now larger, and may be a gummy tumor. We are giving large doses of iodide of potassium, and hope the patient will improve. Years ago I took from the neck of a man what I supposed to be a fibroid, but found it ran in all directions, and that it was plastic. The man got well, and might have done so with medicine alone, for the tumor undoubtedly was specific. In this case if we have no improvement after a short time I shall operate.

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[1] Professor Hall, of the University of Maryland, exhibited to his class in 1837 a colored man, aged fifty-five, who had large, soft, well-formed mammæ, rather more conical than those of the female and projecting fully seven inches from the chest, with large and perfect nipples. To the touch the glandular structure seemed to be exactly like that of the female. This man had officiated for several years as wet-nurse in the family of his mistress, and he

[The tumor disappeared in three weeks.]

Periphlebitis. — Here is a case of periphlebitis which formerly was called adhesive phlebitis. The patient is a middle-aged woman, and has varicose veins, which furnish a typical example of plugged vessels, and illustrate the history of embolism. It will be seen that the condition is well marked. Here on the thigh are varicose veins filled with coagulated blood and surrounded by the blush of inflammation. When the patient came in, she could not walk. Here at the saphenous opening you see enlarged lymphatics. Below you observe the site of two thrombi which have formed near valves in the veins, where anastomoses occur, and have then gradually enlarged. The symptoms are all directly under the skin. Following parturition we sometimes have symptoms of the plugging of the deeper vessels and of inflammation extending up into the pelvis. Here every symptom is superficial and visible. If the patient walked about and submitted to the bad treatment of friction, the thrombi would probably be started, thus being converted into emboli, or traveling clots, which would become arrested somewhere else, where they would form metastatic abscesses. The treatment of this case is very simple, namely, rest in bed and soothing applications, but no motion, rubbing, or friction of any kind. We hope thus to soften and remove the clots by molecular absorption. Some may remain and so effect a spontaneous cure, similar to that by ligature, which latter operation is dangerous because it forms clots, which may become detached, and when once swept on by the blood current may go to any distance, but where they will go or what they may do we do not know. For the same reason friction also is very dangerous. Rest in bed is the indispensable and all-important treatment.

represented that the secretion of milk was induced by applying the children entrusted to his care to the breasts during the night. When the milk was no longer required great difficulty was experienced in arresting the secretion. His genital organs were fully developed. (Dunglison's Physiology, seventh edition, vol. ii., page 514.)

TWO CASES OF GLAUCOMA, WITH SOME REMARKS ON THE RELATIVE FREQUENCY OF THIS DISEASE IN AMERICA AND EUROPE.

BY HASKET DERBY, M. D.

THE following cases of glaucoma present some points of special interest, and are hence reported. The disease itself is, as has often been insisted on, one deserving the most careful study, not only from the specialist, but also the profession at large, into whose hands its subjects are, at the outset, so likely to fall. The prompt measures that should be taken for its relief, the comparative certainty of their action, and the disastrous consequences of neglect or delay have so often been alluded to that it would seem unnecessary continually to dwell on these points. Yet experience shows that they cannot too often be brought forward.

Characteristic as are the symptoms of glaucoma the disease occurs in this country with such comparative infrequency that it is less surprising when its first slight advances excite no alarm, or the age of the patient leads to their being looked upon as evidences of commencing cataract. In Europe it is estimated as forming about one per cent. of all cases of ophthalmic disease. Graefe found it to constitute 1.27 per cent., Förster 0.84 per cent., of their cases. Observations made on 55,146 instances of ophthalmic disease gave 688 cases of glaucoma, or 1.24 per cent.

I have collected from reports of various American ophthalmic institutions a total of 125,315 cases of disease, of which 645 came under the head of glaucoma, making a percentage of 0.51, and showing a greatly decreased proportion of the disease in this country. It should, however, be stated in passing that these figures are kept down by the statement made by the Massachusetts Charitable Eye and Ear Infirmary. Looking through the reports of this institution since 1867, and comparing them with those of other eye infirmaries in this country, we find, —

Total number of cases of eye disease		Glaucoma.	Per cent.
in Massachusetts Charitable Eye and Ear Infirmary,	47,694	132	0.276
Total number of cases collected from other American institutions,	77,621	513	0.66

It is interesting to note the relative frequency of this disease in private practice. Referring to my own records I note, —

Recorded Cases.	Glaucoma.	Per cent.
8719	67	0.77 nearly.

Glaucoma is evidently rarer in this country than in Europe.

Of my own patients twenty-three were males, forty-four females. The average age of the former was fifty-five and one half, of the latter sixty. Only four times, and always with females, did I see the disease in its acute form.

Case I. Mrs. H., aged fifty-two, had always enjoyed excellent health, and never had any trouble with her eyes until within a few weeks. She came to me December 14, 1878, complaining of intermittent obscurations, and the occasional appearance of rainbow colors around a flame, both of these symptoms being experienced in the right eye only. On examination this eye, as well as the other, was found normal in every respect. Hypermetropia 2.75 D; vision $\frac{6}{6}$; visual field unimpaired; no corneal anæsthesia, dilatation of pupil, or increase of tension. The ophthalmoscope showed a venous but no arterial pulse; no excavation. January 13th of the present year I saw the patient again. Intense nocturnal pain and great falling off of vision had been present for four days. The right eye was now of stony hardness, pupil dilated and fixed, cornea hazy and anæsthetic, vision $\frac{3}{50}$. No view of the fundus could be obtained. The other eye remained normal. Within a few hours I etherized her, and performed a free iridectomy upwards. The anterior chamber was so narrow that the point of the knife became engaged in the iris, near its pupillary edge, carrying it before it for some distance, and producing a slight dialysis. Much bleeding took place during the operation, but before applying the bandage the anterior chamber was observed to be quite free from blood.

The next day I learned, to my astonishment, that pain in the eye had come on soon after the operation, and gradually increased in severity up to midnight, reaching an intensity it had never before attained. It had finally been subdued by the repeated application of warm fomentations, and up to the time of my visit (four P. M.) had not returned. On removing the bandage it was found that the anterior chamber had not yet been reëstablished. January 15th Mrs. H. reported that some pain came on about midnight; was, however, less severe, and lasted a shorter time than that of the day before. The wound was now healed, and a very narrow anterior chamber existed. January 16th, nine A. M. Entire freedom from pain for twenty-four hours, anterior chamber of normal size; some tendency to cystoid cicatrization about wound.

At noon of this day very severe pain occurred in and around the other (left) eye, radiating over the face and forehead, and down the side of the nose. It was most intense, and was compared by the patient, who had borne several children, to labor pain, differing, however, from that in having no remissions, and being even more acute. The eye that had been operated on remained in the same condition as at the previous visit, but the left presented the symptoms of acute glaucoma, increased tension, ciliary redness, dilated pupil, and diminished vision.

It was so late in the day, and the afternoon so dark, that I feared to undertake the operation at once. A one per cent. solution of eserine was repeatedly applied, and fomentations ordered, the result being the disappearance of the pain in the course of the evening. The next morning (January 17th) no symptoms of the attack remained except a narrowed anterior chamber. Ether was given, and iridectomy done upwards. That night intense pain came on in this eye, and was relieved by fomentations. January 18th. No anterior chamber. January 19th. Some pain in night; less, however, than the night before. A narrow anterior chamber exists. From this time the pain remained absent, and vision steadily improved. January 29th, when I saw her last, it was nearly $\frac{6}{12}$ in each eye, and daily gaining. The cystoid cicatrization had disappeared. There was a single retinal extravasation by the side of the right optic disc, no cupping in either eye, and no limitation of either visual field.

This case is of interest as showing the possibility of continuance of pain after the performance of the iridectomy. The pain here persisted while the anterior chamber remained open, and disappeared after the healing of the wound. If the modern theory that glaucoma depends on an affection of the pericorneal region, an obliteration of the means of filtration provided for the intra-ocular fluids, be correct, and if iridectomy or sclerotomy cures the disease by establishing that filtration, at first through the wound and later its cicatrix, we may well ask ourselves why the pain, in the present instance, should have increased in intensity while the cut remained open, and disappeared immediately it had closed.

Case II. The other case illustrates the unexpected amount of good an iridectomy may accomplish even in a case of chronic glaucoma that had been treated by atropine.

I was called out of town on the evening of January 18th to see a lady, sixty years of age, who six months before had begun to notice intermittent obscurations of vision, and to need much stronger glasses than she had previously worn. Early in November she did a good deal of watching with a sick member of her family, and became much fatigued. Towards the middle of that month "inflammation," attended by severe circum and supra orbital pain, came on in each eye. She was treated for iritis, confined to a dark room, and ordered to use freely a solution of atropine. In a fortnight the pain in the left is said to have ceased, and the eye to have steadily gained vision ever since. The right did not improve in this respect, though the pain slowly abated.

For two weeks previous to my visit she had used no atropine. I found the pupil of the left eye slightly dilated and sluggish, oval in shape. No increase of tension, visual field normal, no cupping or pulsation. Myopia 1 D; vision nearly $\frac{6}{6}$. The right eye was very hard (+ T 2); cornea anæsthetic and hazy; much ciliary congestion; pupil dilated *ad maximum*, a thin edge of iris alone being visible. Visual field much limited in every direction except outwards; moving hand visible in two meters. No view of the fundus could be obtained.

Iridectomy was found very difficult, owing to the extreme narrowness of the anterior chamber. It was performed on the right eye January 19th, and a fair piece of iris was excised. Seven hours after the operation severe pain came on, but was relieved by fomentations. Four days elapsed before the anterior chamber was reëstablished. On the 27th a clear view of the fundus could be obtained, and the optic disc was found to be slightly cupped. Vision had increased to $\frac{5}{24}$, and was daily improving. Mydriasis was still extreme; tension much less.

I had anticipated that the operation on the right eye might lead to a fresh attack of glaucoma in the left. Up to the present date, however, (February 11th) none has occurred.

ARSENICAL WALL PAPERS.

BY FRANCIS H. BROWN, M. D.

SOME two or three years ago, following the reading of a paper on arsenic papers, in the Boston Society of Medical Observation, a committee was appointed to memorialize the legislature for the passage of a law to prevent or control the use of arsenical pigments in articles of domestic use. The petition was signed by representatives of twelve or fourteen of the medical societies throughout the State, and was presented to the legislature in due form. At the call of the committee of the senate on the judiciary, well-known physicians appeared before them and urged sanitary reform. The subject was fully discussed, reference was made to numerous cases of poisoning, of long and tedious illness, of permanent invalidism, and all the other results, and the committee themselves admitted that the evil was a serious one, and should be abated. Attention was at the same time called to the great danger arising from the use of green tarlatan and other clothing fabrics, of the coloring matter of confectionery, of the glazed green papers employed to cover lozenges and in the kindergarten schools. It was admitted that the delicate and beautiful tints of the arsenical pigments, their cheapness, and the ease with which they are worked make them desirable agents, so far as the manufacturers are concerned, but such considerations could hardly be valid where the health of the people is concerned. At the same session of the committee a series of German wall papers with purely vegetable colors were shown, which give equally brilliant, enduring, and satisfactory results.

The committee, however, felt themselves justified in declining to advise legislation at that time. It is to be hoped that at some future time, and with the hearty aid of the profession, another attempt to secure sanitary legislation in this direction will be more successful.

Since that time a typical case of arsenic poisoning from wall papers has occurred which is worth putting on record. A previously healthy young lady had slept for six years in a room having on its walls a beautiful paper in two shades of green. Her home was in a very healthy locality in one of the suburban towns; her manner of life was particularly health giving, and she exercised freely in the open air. To these circumstances are probably due her exemption from disease for a considerable period.

Of late years she had engaged in the study of vocal music to fit herself for public singing, and for this purpose she had come into the city twice a week.

For several months she had had symptoms of general malaise. She had first noticed headache, sleepiness, exhaustion, with slight and occasional pains in the left side and right shoulder. Her tongue had been coated for some months, and she had had a brassy taste in the mouth, nausea at times, with no known cause for it, great thirst, and capricious appetite. No diarrhœa or other noticeable irregularity of the bowels. For some time she had had nasal catarrh, especially after singing or talking; a tendency to take long breaths; a hard, dry cough; and some soreness of the throat. Her voice failed her, and she was obliged to abandon her singing. No other disturbances of the respiratory organs noticed.

For several years she had had weak eyes; latterly they had ached, particularly in the morning, and had caused her much trouble. Considerable emaciation, hot flushes, headache almost constantly, occasional cramps. During a visit of a fortnight away from home she "felt like a new person," and her symptoms almost entirely disappeared, to return again the next day after reaching home.

I examined the paper on her room, and found it heavily loaded with arsenic. On my recommendation it was at once removed, and the room thoroughly cleansed; the patient recovered her health at once.

In the same connection my attention has been called to a series of bright-colored papers, employed in kindergartens for young children, for purposes of ornament and for the manufacture of variegated mats and other attractive objects. One of these papers is of a bright green color, both glazed and unglazed. It is the same article which was formerly, and perhaps now, employed to cover lozenges and other confections. I have analyzed it qualitatively, and found it to contain arsenic in considerable amount. According to Dr. Draper's statement in the State Report for 1872, apparently the same paper contains 8.67 grains of the pigment to the square foot, representing some fifty per cent. of arsenious acid. Cases of serious poisoning of children by these papers have already occurred, and when it is remembered that the mouth of a young child is so frequently the receptacle of what is nearest at hand, we may well congratulate ourselves that more frequent cases of poisoning do not oftener occur.

RECENT PROGRESS IN ANATOMY.

BY THOMAS DWIGHT, M. D.

Anomalies of the External Carotid and Internal Maxillary Arteries.[1] — Professor Joessel, of Strasburg, has described some anomalies believed to be new. Those of the carotid are particularly interesting, and of surgical importance. In the first case the common carotid gave off the superior thyroid, and then, on a level with the hyoid, divided into the external and internal, from the latter of which the ascending pharyngeal arose. The external carotid gave origin to the lingual and to the occipital, from which a stylo-mastoid and a large muscular branch took origin. The carotid then, just above the angle of the jaw, divided into two trunks which reunited behind the neck of the jaw and continued as the temporal artery. From the anterior trunk came the facial, the inferior dental, and the internal maxillary vessels; the hinder one gave the posterior auricular.

The second case is very similar, but less complicated. Just at its origin the external carotid gave off the superior thyroid, and then, by a common trunk, the lingual and facial. The carotid divided a little lower than in the first case, and the trunks reunited at the same point. The anterior gave off the internal maxillary just before it joined the hinder one, which gave off the occipital and posterior auricular. The temporal took origin from the superior convexity of the arterial circle.

The following remarkable anomaly of the internal maxillary was practically symmetrical on both sides of the head. The essential feature is the bifurcation of the external carotid into its terminal branches, the temporal and internal maxillary opposite the angle of the jaw. The former keeps on in the normal course of the external carotid, but the latter turns behind the internal pterygoid and then pierces it, making its way before the external pterygoid to the spheno-maxillary fossa.

Anomaly of the Femoral Artery.[2] — Mr. A. H. Young describes a peculiar arrangement of the branches of the femoral artery which is of surgical interest, and which differs from all published anomalies. It occurred on the right leg of a male subject. The important point is that the profunda was wanting, and the branches that supply the lower part of the adductor region and of the back of the thigh were given off from two trunks which arose after the femoral had passed beyond Scarpa's triangle and was under cover of the sartorius. The first of these trunks arose five and one half inches below Poupart's ligament, the second one inch lower. It is evident that if the femoral were tied at the point of election the supply of blood to the parts below the ligature would be much smaller than usual.

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[1] Archiv für Anatomie und Entwickelungsgeschichte, 1878, Heft 6.

[2] Journal of Anatomy and Physiology, January, 1879.

Mr. T. P. Anderson Stuart[1] records a peculiar course of the *popliteal artery* which also might be of surgical importance: "The popliteal artery, after passing through the opening in the adductor magnus, instead of, as it usually does, coursing downwards and outwards to the popliteal space, so as to lie between the two heads of the gastrocnemius muscle, passes almost vertically downwards and outwards beneath it, between it and the lower end of the shaft of the femur. The inner head of the gastrocnemius arises much higher than usual, namely, from the inner division of the linea aspera about an inch and a half above the condyle, and thus leaving a considerable space between it and the condyle, over which space the artery passes."

The Ridges of the Human Palate. — The ridges very commonly found near the front of the hard palate have been overlooked by many anatomists. Owen, in his Comparative Anatomy, states that "in the higher quadrumana the palate is smooth or unridged, as in man." This is in both cases a mistake; it is ridged in the higher apes, and, as above mentioned, sometimes in man. Perhaps Sappey gives a better account of these ridges than is found in the other standard works on anatomy. He says: "On each side of the median raphe, in the anterior third of the palate, there is a series of rough crests, transverse or oblique, straight or curved, three or four in number, raised one above another from below upward and from before backward. Between these principal crests there are frequently others less well marked." It is to be objected to this description that it implies that these folds are constant, which is not the case, and also, if we understand it aright, that the posterior ones are the most developed, which is the reverse of the fact.

Professor Carl Gegenbauer[2] has written an interesting paper on these ridges, which he has studied in the embryo, the child, and the adult. In embryos measuring 4.2 cm. and 4.5 cm. from the vertex to the breech he found the hard palate perfectly smooth. A little later, however, there was evidence of the beginning of the alveolar process, and also the posterior, median part of the hard palate was found flat, while the rest sloped down towards it. Moreover, on the latter part were to be found from five to seven transverse ridges, almost meeting in the fore part of the palate, but separated by the flat portion in the posterior part. As the embryo grows, the two parts of the hard palate become alike, and the transverse folds are collected into the anterior portion, the foremost being the more developed. In the later months of pregnancy and at birth their edges are fringed and their arrangement less regular. They persist during childhood, and then gradually atrophy; traces are often found in the adult. Gegenbauer states that these folds are found in all mammalia, with the exception, perhaps, of the whales.

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[1] Journal of Anatomy and Physiology, January, 1879.

[2] Morphologisches Jahrbuch, Band iv., Heft 4, 1878.

[We should be inclined to ask if the plates of whalebone in the *balænidæ* might not be considered homologous with these ridges.] There seems reason, therefore, to class these ridges among the rudimentary organs which are useful in some types, as these are as aids to mastication in animals, and exist in other types in which they apparently perform no function. There is no reason to believe that when these are most developed they can be of any use to the human infant.

The Development of the Knee in the Human Embryo. — Dr. Bernays,[1] of St. Louis, has written an extremely interesting and valuable paper on this subject, and has added some observations on joints in general. He has made several series of microscopic sections through the knees of the human fœtus, beginning with one which measured only two cm. (from the vertex to breech ?), and which he supposed to be some four or five weeks old. Cartilage was already differentiated, and there was more than a hint of the quadriceps extensor. The author calls attention to the fact that the head of the fibula is not much further from the femur than the tibia is, and that the tibia does not project over it as yet. He gives special importance to a cellular layer surrounding the cartilage, from which the latter increases. It is deeply stained by carmine. In the next embryo, three cm. from vertex to breech, the ends of the bones show some slight approach to their shape, though no joint cavity is yet visible. The interarticular ligaments can be distinguished. The patella can be seen below the fibres of the extensor, which pass uninterruptedly over it. The sections of an embryo 4.5 cm. from vertex to breech show a great advance in differentiation of tissue and in the shaping of the joint. The articular cavity is present, and the whole shape of the parts is about the same as that of the child at term. Dr. Bernays holds that the cavity of the joint is formed by a separation, probably due to muscular contraction, of the cartilaginous ends of the future bones. At an earlier stage these are separated by a certain amount of still undifferentiated tissue. A part of this is transformed into ligaments and intra-articular fibro-cartilage ; the remainder becomes cartilage in continuation with those of the femur and tibia, till finally it divides at the middle. Little bulgings out appear at different points. The ligamenta alaria, the ligamentum mucosum, and the synovial fringes are formed from connective tissue. The author maintains that the synovial membrane is a purely connective tissue formation, and is not lined with an epithelial layer. Dr. Bernays dwells on the point, which we agree with him in considering of importance, that muscular action cannot, as some have asserted, determine the shape of the joint ; for this is pretty clearly indicated before the cavity has appeared and any motion is possible between the segments. He holds that the form of the joint is due to inheritance, and that it is at a later period that irregular muscular action may complete the development of the cavity. The author of this paper has done his work very well, and we recommend its perusal to those interested in this branch of embryology.

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[1] **Morphologisches Jahrbuch, Band iv., Heft 3, 1878.**

The Quadriceps Extensor Cruris. — This muscle is one which gives much trouble to students who endeavor to understand its true structure. Dr. Williams's paper,[1] though necessarily rather dry, is of real value. We have time to allude merely to some of the chief points. He shows very convincingly that the acetabular head of the rectus is its real termination (or origin), and that the more superficial head attached to the anterior inferior spinous process of the ilium is quite a secondary affair, being nothing but a band of condensed fascia instead of a true tendon. The microscope shows a great number of yellow elastic fibres in this head on the addition of acetic acid, and hardly any in the acetabular head. Dr. Williams remarks that "this view also receives confirmation from the examination of the muscle in the fœtus. At about the sixth month only the acetabular head can be distinguished. The iliac head cannot be discriminated from the fascia of the part. At full term the acetabular head is as large as the main tendon, of which it is obviously the direct continuation, whilst the iliac head, though plainly visible, is relatively insignificant." We are not aware that the account of the lower end of the rectus presents anything new, but it shows that to obtain a correct idea of it the student must not fail to examine its deeper parts. We must be pardoned another quotation which gives Dr. Williams's views on the origin of the vastus internus, which is frequently taught to be well-nigh inseparable from the crureus: "At the middle third of the thigh the thick fleshy edge of the vastus internus may be readily distinguished from the aponeurotic surface of the crureus. A line drawn from the tubercle at the middle of the spiral, or anterior inter-trochanteric line, inclining downwards and slightly outwards to the middle of the upper border of the patella, will define accurately the thick anterior border of the vastus internus. This tubercle at the middle of the spiral line has not hitherto been noticed by anatomists. In well-marked bones it is always distinct. I have ventured to call it the *inferior cervical tubercle*, in contradistinction to the tubercle at the top of the spiral line, which may be spoken of as the *superior cervical tubercle.* It corresponds to the attachment of the lower end of the inner arm of Bigelow's inverted Y ligament, just as the upper tubercle does to the outer arm of this ligament." Dr. Williams describes a nerve from one of the muscular branches of the anterior crural which is distributed to the subcrureus and to part of the synovial pouch, and which, running along the edge of the crureus for its lower three fourths behind its line of union with the vastus internus, forms a good guide for distinguishing these muscles. The description of the origin of the crureus is very good. He makes the muscle consist of four laminæ, distinct above, each one rising from a fleshy arch across the front of the femur and fusing below. He considers the subcrureus a rudiment of a fifth arch. The author calls attention to the fact that the common tendon, "as insisted on by Cruveilhier, is inserted not into the upper *border* of the patella, but into the *front* of its obliquely cut upper surface. Similarly, the ligamentum patellæ is fixed to the *front* of the apex. In this way the axis of the tendon is removed somewhat from the centre of motion of the joint, so that the muscle acts at the greatest advantage." It is interesting to recall that Dr. Bernays in his paper on the development of the knee shows that in the earlier stages the fibres that are to form this tendon pass directly over the patella.

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[1] The Anatomy of the Quadriceps Extensor Cruris. By W. Roger Williams, M. R. C. S. Journal of Anatomy and Physiology, January, 1879.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

T. M. ROTCH, M. D., SECRETARY.

OCTOBER 26, 1878. Sixty-one members were present, the president, DR. C. D. HOMANS, in the chair.

Retroversion of the Uterus complicated with Pregnancy. — DR. J. R. CHADWICK read a series of cases of Retroversion of the Uterus complicated with Pregnancy. Reserved for publication.

Œsophagotomy. — Dr. G. W. GAY read a case of œsophagotomy, which was published in the JOURNAL for March 13th.

Amputation at the Hip-Joint. — DR. GAY also reported the following case: The patient was a stout, fleshy man, forty-two years of age. He first noticed a small, oval bunch just above the internal condyle of the left femur three or four years ago. At first the growth was gradual, but of late it had increased very rapidly, being a third larger at the time of the operation than it was three months previously. He entered the City Hospital October 11, 1878, under the care of Dr. Thorndike. The left thigh measured thirty-eight inches in circumference. The tumor was hard, lobulated, and extended from the knee to the great trochanter. The pain was so severe that life was a burden to the man, and he was willing to take any risk for the sake of relief. October 18th Dr. Thorndike amputated the leg at the hip-joint by a large, outside skin flap extending from the middle of Poupart's ligament to the tuberosity of the ischium, and an inner muscular flap. The femoral artery was tied previous to making the flaps; vessels were seized as soon as divided, so that the hæmorrhage was not excessive. Not over half a dozen ligatures were used. It should be stated that the sphincters were dilated, and the hand passed into the rectum previous to the operation, with a view to controlling the hæmorrhage by pressure upon the common iliac artery. The vessel was easily reached, but owing to the large amount of fat and soft tissues about the artery, and to the fact that the arm of the assistant would have been in the operator's way, that plan was abandoned, and the femoral artery tied about three inches below its commencement. The patient did well for two days, when pyæmic symptoms set in, and he died on the fourth day. The amputated limb weighed fifty-four pounds. — DR. E. G. CUTLER reported that a gross examination of the thigh showed it to be made up of fat tissue, which was elastic, more or less gelatinous, and was arranged distinctly in alveoli surrounded by a fibrous tissue bearing blood-vessels. The disease began in the thigh, posteriorly, at the back of the intercondyloid space, and encroached upon the tissues in a general upward course in all directions; the bone was but slightly involved behind and below. In no place had the growth broken through the hard portion of the bone into the cancellated structure. A microscopical examination showed the tumor to be composed of a basement hyaline transparent substance, in which, imbedded in little grooves, were cells of various shapes, round, oval, stellate, and caudate. These cells had but a single wall. In other places the basement membrane was fibrous, and the cells were close together. The cells were differently arranged in different parts, — in some places close together, in others more separated. The tumor was an enchondroma.

Imperfect Plumbing. — DR. H. I. BOWDITCH presented a specimen of lead pipe which had been taken from a house where a case of typhoid fever had occurred, and later one of diphtheria. A leak was detected by the peppermint test at the junction of this pipe with the soil-pipe, it being connected with the latter only by means of putty and wire.

Oleic Acid. — DR. E. W. CUSHING called the attention of the society to the advisability of applying, in certain cases where the hypodermic injection of morphia is objected to, a solution of morphia in oleic acid, rubbed over the painful part. He stated that he had found it as efficacious as hypodermic injections, but that it did not act quite so quickly. — DR. INGALLS remarked that he had tried this remedy in cases of painful joints, some years ago, without any apparent effect, but that he had probably made use of a poor preparation. — DR. CUSHING replied that very marked results had been obtained from the application of a mixture of morphia and mercury, and that he knew of a case where quite severe symptoms of poisoning had arisen after the application of thirty minims of a solution of morphia in oleic acid of the strength of Magendie's solution.

Felons. — DR. BRADFORD stated that he had noticed in his treatment of felons that, after the incision, the wound healed more rapidly when dressed with carbolized oil than by the old method of simple poulticing; he is now in the habit of first washing the wound in a solution of carbolic acid, and then applying cotton-wool soaked in carbolized oil, the whole being enveloped in sufficient wool to retain the flow of pus; the dressing is not removed for twenty-four hours, and is then reapplied.

NOVEMBER 30, 1878. *Electrolysis of Uterine Fibroid.* — DR. E. CUTTER reported the case of a woman, forty-four years of age, with a uterine fibroid, through which he passed a current of electricity by introducing one of the needles into the tumor by the rectum, and the other through the abdominal wall. At the time of the operation the pulse rose to 130 beats per minute; after the operation considerable pain was reported, and the temperature at one time rose to 102° F. Relief from pain and from hæmorrhage was claimed for the operation.

Excision of the Hip-Joint. — DR. E. H. BRADFORD reported a series of cases of excision of the hip-joint, and exhibited the specimens.

Optico-Ciliary Neurotomy. — DR. WADSWORTH exhibited a patient on whom he had divided the optic and ciliary nerves of the left eye to avert the danger of sympathetic ophthalmia. The man was a boot-black, forty years of age. Fourteen years ago cataract had developed in both eyes. The cataract was removed from the left eye thirteen years ago, but some two years later its sight gradually failed again, as he was told, from separation of the retina. Ten years ago the cataract was extracted from the right eye. Both eyes were quiet till the 10th of September last; then the left became red, he had photophobia and lachrymation, and soon there came on tenderness over the upper part of the ciliary body, though without much pain. He was treated as an out-patient at the Infirmary, and toward the end of October was apparently well, and resumed his work. He had been at work but a week, however, when the redness of the left eye and photophobia returned, and three or four days later, November 7th, he went to Dr. Wadsworth, who found in the left eye moderate circumcorneal congestion, with tenderness on pressure in the upper ciliary region; its pupil was large, but no reflex could be obtained from the fundus; it was completely blind. The right eye was sensitive to light, but appeared otherwise in good condition. Atropine, rest, and avoidance of light did not relieve the symptoms, and there also began to be an appearance of sparks before the right eye. November 12th, under ether, an incision was made over the internal rectus of the left eye, a strabismus hook passed beneath the muscle, and two sutures carried from within outward through muscle and conjunctiva a little back from the insertion of the former. The tendon was then divided $\frac{1}{2}'''$ from its insertion, and the cut extended freely upward and downward through the conjunctiva and Tenon's capsule. The attached end of the tendon was seized by forceps, and the globe rolled outward, while curved scissors were pushed between globe and capsule, and the optic nerve divided as in enucleation. Very little bleeding followed, but as a measure of precaution the lids were closed, and pressure made with a sponge for two or three minutes. The curved scissors were again introduced to divide the remaining ciliary nerves and arteries, and then the globe could be readily rolled into a position which brought the stump of the opticus almost directly in front, and made it evident that all the ciliary nerves had been severed. The eye was replaced, the internal rectus united to its tendon by the sutures, and a compressive bandage applied. There was very little exophthalmos at this time. The evening after the operation there was pain in the head, but not particularly about the eye, and apparently attributable to the ether. The next day the exophthalmos was considerable; it seemed to be owing to swelling of the tissues behind the eye, not to hæmorrhage. The lids were ecchymosed, but not swollen; the conjunctiva was dark red, somewhat swollen and ecchymotic. The cornea was clear. Aside from a little tenderness over the conjunctival wound, there was no pain, nor was there any subsequently. During the next few days the exophthalmos gradually subsided, but chemosis of the lower part of the conjunctiva came on. The sutures were removed on the fourth, the bandage was omitted on the ninth day. The chemosis diminished for several days; then, probably from slipping of the bandage, and consequent uneven pressure, increased again somewhat. During the past week, under iced compresses, it had disappeared. Meanwhile the eye had been constantly gaining in freedom of motion, until, but for a little insufficiency on the side of the divided muscle, it moved as far and as readily as the other. The cornea was tested on the second day, and found completely anæsthetic, and it had remained so; its transparency had been unimpaired from the first. On the twelfth day a small clot of blood was seen at the bottom of the anterior chamber. Nothing was discovered to account for its presence, and two days later it had been absorbed. There still remained some conjunctival congestion, but in other respects the eye appeared as well as before the operation. Dr. Wadsworth said that the operation was a comparatively new one. Schoeler, of Berlin, had published an account of ten cases in which he had so operated during the last part of 1877 and first part of 1878. Hirschberg and Schweigger had also performed the operation successfully. It was remarkable that after division of all the nerves supplying the interior of the eye and the cornea, and division of the greater part of the arteries going to the interior of the eye, it should still preserve its vitality. Ulceration of the cornea Schoeler had indeed observed in two of his cases, but it was not extensive, was painless, and healed readily under appropriate treatment; it could, moreover, in both cases, be fairly referred to a defect in the operation or after-treatment. It could not yet be stated with certainty that the ciliary nerves might not reunite, as so frequently happened in the case of section of other nerves, and thus opportunity for the excitation of sympathetic ophthalmia be again presented. But the anatomical conditions were here such as to make reunion at the least very improbable. The ciliary nerves were small, ran through loose tissues, and could readily contract, and even though a few of them might be held in position by connections with Tenon's capsule, yet the almost constant movement of the eye within the capsule must of itself make reunion very unlikely. Remembering that after enucleation it was sometimes impossible to wear an artificial eye with comfort; that it was often difficult to procure an eye which matched the other well; that the cost was considerable for a poor person; that the movement of an artificial eye was in the most favorable case much limited, while often there was no movement, it seemed that optico-ciliary neurotomy, as Schoeler had named the new operation, was likely to take the place of enucleation to a very considerable extent.

Santa Barbara. — Dr. E. L. Parks made some interesting remarks in regard to the climate of Santa Barbara, and its value as a place of resort for consumptives, which will be published.

FOTHERGILL ON THE ANTAGONISM OF THERAPEUTIC AGENTS.[1]

This essay received the Fothergillian gold medal for 1878. The subject of antagonism is presented by stating what particular symptom which may follow a definite dose of one drug may be relieved by the administration of a definite dose of another drug. Upon these data Dr. Fothergill suggests that medicinal agents possessing this form of antagonistic action may be combined; so also symptoms resulting from pathological lesions or functional derangements may receive useful antagonistic treatment, as, for instance, the employment of digitalis in cases of dilated heart. In his first chapter he presents a historical summary of experimental inquiry into the antagonism of opium and belladonna, of physostigma and atropine, strychnine and chloral hydrate, aconite and atropine, belladonna and jaborandi; but closes with the lament that the British vivisection act arrests further progress in his own country, while a grand field is open to foreign inquirers.

The second chapter is concerned with the action of drugs as illustrated chiefly by experiments on lower animals, but Dr. Fothergill does not omit the use of observations derived from clinical experience, especially those recorded by Crichton-Brown. Many suggestions are here offered as to the clinical importance of various combinations of drugs, as also symptomatic and pathological contra-indications against certain combinations, and also as to the value of combining drugs whose effects are partially controlled by others.

The fourth chapter is taken up with a discussion as to the antagonism of those drugs whose effects are the results of disturbance in the circulation of blood. Here Dr. Fothergill gives in detail the *modus operandi* of digitalis, and apologizes for the digression by explaining that his original essay on digitalis is now out of print. A comparison with this essay shows that his present method of stating the action of digitalis is clearer than in his former publication. Dr. Fothergill here specifies those drugs which will control or antagonize irregularities in the respiratory functions due to pathological conditions, and points out certain paths in which the clinical observer may further test the therapeutical action of medicines; in a separate chapter he explains how the antagonism of medicinal agents may be used to counteract poisonous agents, and finally how the theory of antagonism may be put to practical purposes in stimulating the organic life, or in checking an over-excitability of these phenomena.

The manner in which the author uses the word antagonism in place of stimulants, sedatives, etc., with various adjectives to qualify these latter words, seems to exhibit a more certain knowledge, and prevents ambiguity. It suggests to the reader that in a near future the language of therapeutics will be simpler and more decided; the various forms of classification used by each writer and lecturer on therapeutics may be abrogated, and in their stead we may have laid down in simple and terse phraseology a practical application of medicinal agents with which to combat symptoms due to known pathological conditions; and yet it may be, and probably it is, a fact that the enunciation of a knowledge of these actual effects of medicinal agents is at present premature. The confident assumption of such knowledge bids fair for the determination of error from truth. We recommend this book to the busy practitioner, who will get many a hint to help him at the bedside, and most certainly will be led to analyze his own reasons for the use of this or that method for the *cure* of disease.

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[1] *The Antagonism of Therapeutic Agents, and What it Teaches.* By J. Milner Fothergill, M. D. Edin., etc. Philadelphia: Henry C. Lea. 1878.

DELAFIELD'S PHYSICAL DIAGNOSIS.[1]

THE preface to this book states that "this manual is intended for the use of those who have to teach and to learn the art of physical diagnosis. It is made as concise as possible, and bound interleaved that it may be taken into the wards and used as a note-book as well as a guide. The object of the entire work is to furnish a sort of skeleton, to which each one may add the facts furnished by his own observation."

We have no hesitation in saying that this book is unworthy of its distinguished author (Dr. Delafield). Entitled a Manual of Physical Diagnosis, it contains scarcely more than an allusion to other methods of exploration than auscultation and percussion, and as a compend of information desirable from these methods it is certainly as remarkable for what it omits as for what it contains. It is indeed a skeleton, but one with very many of its bones missing. For instance, that great field for physical exploration, the abdomen, is disposed of by simply giving the results of percussion of the hepatic, the left hypogastric, and the anterior abdominal regions in health, and an enumeration of the viscera situated in the different regions (from Quain's Anatomy), without telling the student how to define these regions, the author even giving different names to two out of three of them on the next two pages. The results of auscultation and percussion in morbid conditions of the abdomen are not even hinted at, peritoneal effusion, tympanites, enlarged spleen, aneurism of the abdominal aorta, and other tumors thus escaping notice by wholesale.

The compend of morbid signs and their combinations in thoracic diseases is certainly no better than that contained in the unpretentious little book of Flint, and the section on the heart is very deficient; for example, the only information one gets to help him in the diagnosis of a valvular lesion is the simple statement of the murmur which may accompany such lesion.

The author differs from most auscultators in making flatness not an absence of resonance, but a peculiarity in quality of sound (*leer* of Skoda?); in using dullness as an absolute term, for example, making dullness of both apices a normal condition; in giving the same quality to normal expiration as to normal inspiration, calling it pulmonary; in adhering to the old conception of œgophony; and in claiming that pericardial effusion first accumulates in the *posterior* part of the sack.

The two drawings with superimposed plates, by Dr. Stillman, are excellent.

In conclusion, we would say that this book can be of no possible use to one fit to be a teacher, and one which we see no reason to recommend to a student.

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[1] *A Manual of Physical Diagnosis.* By FRANCIS DELAFIELD, M. D., and CHARLES F. STILLMAN, M. D. New York: William Wood & Co. 1878. Pp. 30. Quarto.

PRACTICAL SURGERY.[1]

THIS book possesses the unusual advantages of combining in one volume subjects which are ordinarily, for no good reason that we can see, treated separately. We find here, in addition to the plates and descriptions of "operative surgery," the whole department of minor surgery, so that the book forms an excellent *vade mecum* for the surgical student. It is well to remember that the author has had unusual opportunities for preparing such a work, having served as teacher in several capacities, and possessing in an eminent degree the faculty for drilling students in careful methods of study in a manner but too frequently overlooked in our present system of education. The author's name is therefore in itself a guarantee that the contents are of the highest grade of excellence, and such is indeed the fact. Under the head Surgical Dressings we find, for instance, minute directions for preparing new sponges, among which a number of convenient methods of preparation are given. We should, however, take exception to the advice to use fine sponges, a coarse mesh-work being much more useful, in our opinion, in surgical operations. The advice to use new sponges is good, and considering how cheaply they may be bought, if one is not too indolent to be independent of one's apothecary, it is surprising that old and dirty sponges are preserved with such tenacity. Among the immovable bandages we do not find the dextrine, so well known, in Boston at least, and such an elegant form of bandage if lightness and durability are desired, and in which a young lady's "limb" can be made to look almost as "neat" as if encased in the latest style of "billiard-cue" or "clocked" stocking. The starch, silica, and plaster bandages are, however, all accurately described.

The rules for antiseptic dressings of course have a place here. We come next to a word which we are sorry to find, an Americanism which has of late years come into frequent use. We should be glad to see the grandiloquent and pedantic "ligation" omitted from all future writings, and the old, more modest, but to our mind far more surgical, "ligature" allowed to resume its place. "Ligation" begets "ligate," which we think even more offensive. The directions for *tying* arteries are carefully given, and the diagrams are wonderfully clear for their size, as are also those for amputations. The descriptions of operations are concise and plain, and the variety selected is not so great as to discourage the student. In short, the book is just what is needed for the clinic and dissecting-room, and is far superior to any other of the kind we have seen from the pen of an American author.

STAFF AND LINE.

WE supposed that the troubles between the "staff and line" in the army and navy had been composed long ago. We believe that peace now reigns regarding this matter in the former service, but another war seems brewing in the navy, if we may judge from a little pamphlet just received, with the title, A Memorial by Certain Line Officers of the Navy, intended to reopen a Dispute which was settled by Congress in 1871, after full Discussion and Deliberation. With Notes, Comments, and an Appendix. 1879. It would seem that the line officers of the navy consider the rank and privileges granted the staff in 1871 to be of dangerous tendencies and subversive of discipline. On the other hand, General Sherman says that similar concessions to the medical and other staff officers in the army "have worked well in practice." Senator Edmunds, chairman of the senate judiciary committee in 1875, in his written opinion as to the proper interpretation of the law of March 3, 1871, differs radically from the memorialists (the line officers) in his understanding of the law.

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[1] *Practical Surgery.* Including Surgical Dressings, Bandaging, Ligations, and Amputations. By J. EWING MEARS, M. D. With Two Hundred and Twenty-Seven Illustrations. Philadelphia: Lindsay and Blakiston. 1878.

It is difficult for one who has never served in the navy to comprehend the feeling that exists in that service about matters which seem trifling to civilians. But when men are boxed up in the small space and confined air of a ship it is very necessary that their rights and duties should be exactly defined, to prevent clashing of claims and tempers. One would not wish to serve out his worst enemy with graver retribution than to cork him up in an ironclad with an overbearing, a drunken, or a dirty messmate. Like the starling, he can't get out, and if his disagreeable comrade be a superior officer his position is indeed intolerable. Hardships of this sort happened during and before the war, but are rare now. Indeed, a better set of men for honor, for education, or for companionship does not exist than our naval officers, — line and staff. Doctor Johnson defined a ship as a prison, with a chance of being drowned. In this place of confinement the claims of the aid or executive (as they call the "first luff" now), the mess, the salutes, the official etiquette, the thousand petty worries which arise on board, are influenced by the relation of the line and staff.

The act of 1871, which our gallant friends the line officers are trying to have reconsidered, gave relative equality in all save command, which the doctors, paymasters, and engineers do not want, except such as is conceded in each department. It is rash to predict what Congress may do in any given case, but it does not seem probable that that body will rescind the legislation of 1871. It will be difficult to prove that real harm has resulted from it, and British military journals affirm that the status is the same as that existing in European navies. In time of peace the navy offers to a young man rare chances to see the world; in war, unless more than an ordinary share of fighting and chasing falls to his lot, it is dismal. When one is sick or old in the service he is pensioned, and has enough to die on comfortably. But unless a surgeon be adventurous by nature he'd better stick to his "shay" and never go to sea.

JOHN MAYNARD WOODWORTH.

The death of the supervising surgeon-general of the marine hospital service will take the country by surprise. His youth and vigor, and the prominence in which he has been placed during the past year, owing to his active labors in behalf of state medicine, have led many to predict for him a long and honorable career. It was doubtless the great mental and physical strain thus imposed that overpowered him, and opened the way for an erysipelas, which was followed by a fatal pneumonia. He was born at Big Flats, Chemung County, N. Y., August 15, 1837. He was taken to Illinois by his parents, and was educated at the University of Chicago. He first studied pharmacy, and attended the lectures on medicine and chemistry at the Rush Medical College. He afterward entered upon the regular study of medicine in that institution. The winters of 1859, 1860, and 1861 he spent in the Smithsonian Institution, working under the personal supervision of Prof. Spencer F. Baird. He graduated in 1862 at the Chicago Medical College. He immediately entered active service in the army of the Union as an assistant post surgeon at Camp Douglass, Illinois, and shortly after was appointed assistant surgeon of volunteers, and joined General Sherman in the field near Corinth, remaining with his command until the Union armies were mustered out in 1865. In 1863 he was promoted to the rank of surgeon, and assigned to duty as medical inspector of the fifteenth army corps, and afterward medical inspector and medical director of the army of the Tennessee. During Sherman's march to the sea he was breveted lieutenant-colonel. In 1865 he visited Europe, and in 1866 he established himself in Chicago. In 1871 he was appointed supervising surgeon-general of the marine hospital service of the United States, a position which he held up to the present time.

Dr. Woodworth's valuable work in promoting the efficiency of the service he had in charge has been frequently commented upon by us, and is well known to our readers. The valuable weekly sanitary reports compiled from all quarters of the globe savor of an enterprise peculiarly American, and were highly creditable to himself and the country. He has been indefatigable in his work on the yellow fever commission, and in his efforts to obtain national legislation which would enable us to prevent a return of the disease. The bill which finally passed during the last hours of Congress, and the text of which we give elsewhere, although not in accord with his views, established a board of health to which he, among others, had already been appointed when death snatched him in the very height of his career. His loss will be sincerely mourned by the profession throughout the country.

THE FUTURE HEAD OF THE MARINE HOSPITAL SERVICE.

THE dispatch which announced Dr. Woodworth's death hinted also as to his probable successor, the statement being made that he recommended Dr. J. B. Hamilton, an able officer who has been stationed at this port, for that position. We understand that Dr. Heber Smith, now stationed at New York, is the senior officer in the line of promotion. In another column we give the views of one who claims the service as a suitable field of usefulness for medical officers of the navy. It has also been suggested that the duties of the service in regard to quarantine regulation would more appropriately be administered by the new board of health. If any change in this department has been rendered necessary by recent legislation, or to make it harmonize better with future developments, now is certainly a most appropriate time to make it, and we trust that no hasty action will be taken, but that the best interests of the public health will be carefully considered before a decision is arrived at.

THE JOURNAL OF PHYSIOLOGY.

With the current number the first volume of this journal is completed. It is interesting to notice that of the thirty authors whose names appear in the table of contents one third are Americans, and that their work has been mostly done in American laboratories. The institutions thus represented are the Harvard Medical School, the University of Pennsylvania, the Johns Hopkins University, and the University of Michigan. An important feature of the journal is the classified list of books and papers on physiological subjects, which appears in each number. The fact that this bibliographical list occupies fifty-two pages of the first volume shows with how much industry physiological researches are at present prosecuted.

The number before us contains articles by Drs. Cutler and Bradford, of this city, on the Changes of the Globular Richness of Human Blood; by Dr. V. C. Vaughan, of the University of Michigan, on the Estimation of Lime in the Shell and in the Interior of the Egg before and after Incubation; by Dr. Sidney Ringer, of University College, and Mr. E. A. Morshead, on the Physiological Action of Narcissia; and by Dr. Charles S. Roy, assistant at the Physiological Institute of the University of Strassburg, on the Influences which modify the Work of the Heart.

The *Journal of Physiology* has clearly established its claim to be regarded as the organ of English-speaking physiologists, and if subsequent volumes sustain the high character already acquired, its success may be regarded as assured.

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MEDICAL NOTES.

— The Boston Dental College held its eleventh annual commencement on the 5th instant, and graduated thirteen students, three of whom, by reason of under age, or deficiency of pupilage, will have to wait a little while for their diplomas. There have been forty-seven students connected with the college the past year, with prospect of a larger number for the year to come. A spring term opens March 17th to continue ten weeks, and a preliminary term for the month of October will precede the regular November session.

— Physicians who wish to obtain that rare article, a good bandage, will do well to refer to an advertisement in the present number. The very best quality of cloth and every desirable width and length are to be obtained. Coming as they do in assorted lots in boxes, they are exceedingly convenient for office use. The luxury of a well made bandage is hardly appreciated by those who have not had access to a supply of the best quality.

— M. Galippe has published, according to the *British Medical Journal*, some remarks on the propagation of syphilis through the various trumpets, whistles, and other toys sold in the streets by itinerant hawkers, who not only allow every purchaser to try them, but also, if the latter fail to perceive their peculiar properties, perform on them themselves, and hand them to the customers without wiping them. In this way (especially about Christmas) hundreds of people, both adults and children, try one instrument after another, laying each down without wiping it. It is easy to see how rapidly the infection may be spread in this way, attacking healthy persons. Some of these toys, especially little balloons which are inflated by blowing into them, and which in allowing the air to escape produce some sound, pass through the mouths of three or four workmen before they are sold to the public. The author therefore advises parents never to let their children have any toys which have not been thoroughly cleaned.

— Dr. Pajot prepares an elastic pencil of caustic by dipping a laminaria tent, diameter two millimetres, into a rather thick mucilage, and afterward rolling it in finely pulverized nitrate of silver; when dry it forms an elastic pencil which may be readily introduced into the uterine or other cavity without fear of fracture.

NEW YORK.

— The Demilt Dispensary, one of the best equipped and most admirable institutions of the kind in the city, or, indeed, the whole country, has just issued the report of its work during the year 1878. The number of new patients treated by its physicians, either at the dispensary or in their own homes, was 25,002, the number of prescriptions made up 64,615, and the number of vaccinations 209. Since the foundation of the institution, a little over a quarter of a century ago, the whole number of patients has been 678,675, of prescription, 1,419,643, and of vaccination, 53,711. During the year the State Charities Aid Society sent a communication to the managers of the dispensary, asking their opinion as to the advisability of confining the work of relief to the district in which it is located, and of charging a small sum where the patients were able to pay it. A committee from the board of managers met with similar committees from other dispensaries for conference, and as the result of the report of this committee the managers directed that after the first of January, 1879, the sum of ten cents should be asked for each prescription. This plan has been tried in other dispensaries with good results, and it is thought to have a beneficial effect on those applying for relief, as it tends to promote self-respect. The managers also decided to confine the charitable work of the institution to the district in which it is situated, and which contains a population of about 125,000, three fourths of the people being occupants of tenement houses. Before this rule was enforced, it was found that large numbers were availing themselves of its advantages who should properly have been treated by other dispensaries, — some even coming from adjoining cities and States, in consequence of the high repute of the medical staff. As a rule, the physicians composing the latter are men of recognized ability in their various departments, and under the auspices of a board organized by them the clinical reports of the Demilt are published in the *New York Medical Journal* every month. These reports, which are edited by Dr. Thomas E. Satterthwaite, one of the attending surgeons, constitute a unique feature of this dispensary, and from the first have been exceedingly well received by the profession.

— At the last meeting of the County Medical Society, February 24th, a paper was read by Dr. Hermann Knapp on Acute Purulent Inflammation of the Middle Ear, its Occurrence, Causes, Symptoms, Duration, Termination, and Treatment, which was based on the experience derived from 182 cases studied in private and 382 cases observed in hospital practice. It was discussed by

Drs. Roosa, Agnew, Buck, Pomeroy, Sexton, and others. Dr. John C. Peters, chairman of the committee on the yellow-fever fund, reported that $2550 had been sent to families of physicians in Memphis, Grenada, Nicholasville, Kentucky, and Highlands, North Carolina, and that the balance of the sum collected by the Medical Society of the County of New York amounted to $866. The committee reported, in addition, that $1726 had been sent to families of physicians who died in New Orleans by the New York Chamber of Commerce, at the suggestion of the chairman. Besides this amount, the Chamber of Commerce some time ago appropriated $2500 to the County Medical Society's fund, and this, with $250 received from the secretary of state, Hon. William M. Evarts, made the total balance in the hands of the committee $3616.

— There is now on exhibition at Leavitt's art gallery a collection of drawings entered by architects from various parts of the United States, as well as Great Britain, in competition for a prize of five hundred dollars, offered by a number of gentlemen of this city for the best plan of a model house for working people, to be erected on an ordinary city lot of 25 x 100 feet. One hundred and eighty sets of drawings have been sent in, and the cost and general items of construction are shown in specifications and estimates attached to each. Most of the plans provide a stair-shaft independent of the building, and generally in brick, but in some cases these outer stairways are composed of iron.

— During 1878, 1606 cases were brought to Bellevue Hospital by means of the ambulances belonging to its service. Two ambulance-surgeons are constantly on duty, and they can be summoned by telegraph from any police-station or alarm-box of the fire department in the city. The alarm is received in the telegraph office on the first floor of the hospital, and thence transmitted simultaneously to the stables and the room of the surgeon, and however active the latter may be, the ambulance is usually at the door before he reaches the foot of the stairs. All the principal New York hospitals are now provided with ambulances, but of course the largest number of emergency cases are taken to Bellevue.

PHILADELPHIA.

— An argument in favor of compulsory vaccination is found in the fact that in this city, with nearly a million inhabitants, but where vaccination is general, there was not a single death last year from small-pox. Under the old *régime* the number of deaths should be at least a thousand annually, which would be greatly multiplied during an epidemic.

— The long-promised new work, The National Dispensatory, has just been issued by Mr. Henry C. Lea, and reflects great credit upon its authors, Dr. Alfred Stillé and John M. Maisch, Ph. D., to whom the American medical profession is certainly greatly indebted for the painstaking and faithful manner in which they have performed their labor.

CHICAGO.

— The professorship of obstetrics and gynæcology in Rush College has been divided. Professor Miller retains the department of obstetrics, while Prof. Wm. H. Byford steps into the new and independent department of gynæcology. Byford has taught obstetrics and gynæcology for twenty years in the Chicago Medical College, — the last few years only gynæcology, — and resigns his old position to accept the new one. No man is or has been so thoroughly identified with the growth and progress of gynæcology in the West as Professor Byford; no man has done so much for it, or stands so high as a practitioner in this specialty, as he.

— Dr. A. Reeves Jackson has resigned his position as surgeon to the Woman's Hospital of the State of Illinois, as also have his assistant surgeons and the consulting staff. A new staff has been appointed, consisting of Drs. Byford, Nelson, Merriman, Roler, Flood, and Sawyer. The reason of the resignation of the old staff is said to be the difficulty experienced in getting along with the board of management of women. On the other hand, the board of management claim there is another side to the story. The institution is a small one, and is devoted to diseases of women exclusively. It is said to be in debt.

— Dr. E. W. Lee recently described at the West Chicago Medical Society a curious case of fracture of the neck of the femur in a boy twelve years old. The patient went about two or three days after the fracture occurred, feeling only a little lame from a fall he had received on the ice. Then he was prostrated with what was apparently inflammatory rheumatism, and had severe inflammation about the affected joint. On assuming charge of the case Dr. Lee only by accident discovered that there was extensive shortening, having at first taken the case to be one of inflammation of the hip-joint. Although several weeks had elapsed he got crepitation distinctly. He resorted to the weight and pulley. In a few days after the case was reported symptoms of cerebral meningitis began, and the patient has passed through a somewhat severe attack of this disorder, if indeed he can be said to be through it.

— In the competitive examinations for three internes for the County Insane Asylum and Poor-House Hospital, held a few days ago, the second place was awarded to a woman, Miss Moegeler, a member of the graduating class of the Woman's College. This is the first instance in Chicago of a place of this kind being won by a woman in an examination in competition with men.

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BOSTON CITY HOSPITAL.

MEDICAL CASES OF DR. A. L. MASON.

[REPORTED BY DR. G. T. TUTTLE.]

Sun-Stroke; Hyperpyrexia; Treatment by the Cold Bath. — CASE I. Thermic fever. W. B., aged forty-eight, a laborer in a sugar refinery, entered July 3d. He had been working during an exceptionally hot week in a room filled with steam. The day before entrance he complained of anorexia and thirst, drank considerable ice-water, and, on reaching home at night, three glasses in succession. After this perspiration ceased; he felt chilly and restless, and was unable to sleep, but had no headache. On the morning of entrance he went to work as usual, but though the atmosphere of the room was very warm he did not perspire, and was still chilly and felt weak.

At two o'clock, P. M., he started for home, complaining of languor, vertigo, and nausea, but fell on the street, and was brought in by the police at 3.25 o'clock. At the time of entrance he was insensible, perfectly quiet, the face cyanotic, pupils contracted and not responsive to light, skin hot and dry. Pulse 144, bounding. Temperature 108.1° F. in the axilla. Respiration 30. He was immediately stripped and placed in a bath at 74° F., which was reduced to 70° F., and maintained at that point by ice. An ice-cap was applied to the head; he was given five grains of quinine subcutaneously, and in twenty minutes two grains more. At the expiration of thirty-two minutes from the beginning of treatment the temperature was still 104.2° F. in the rectum, but rapidly falling. Symptoms of collapse developed, although three drachms of brandy had been given subcutaneously in the preceding five minutes. He was at once removed from the bath. In twenty-nine minutes more the temperature had reached 96.4° F., in spite of two ounces of brandy by the rectum and one drachm subcutaneously, heaters, and blankets, making a reduction of 11.7° F. in one hour. An hour later the pulse was still weak, the respiration superficial, and the skin cyanotic; he soon vomited, however, and at once became conscious, complaining of abdominal pain, and that he was cold. At 8.15 o'clock the temperature was 101.6° F. Sponge baths were begun, and given each hour throughout the night. The next morning the man's only complaint was weakness, and in eight days he was discharged, well.

CASE II. T. D., aged forty-eight, a carpenter, entered the same day. For three days he had been working on the roof of a building in the hot sun, and began to feel badly the day before, his chief complaint being shortness of breath. The appetite had been fair. On the morning of entrance he went to work as usual, though he had some trouble in breathing and felt weak. He was thirsty, and drank freely, but the water was not iced. There was much perspiration in the morning, but none after dinner, when he had a bad frontal headache, languor, vertigo, and nausea. By three o'clock P. M. all objects seemed to him of a blue color. He finished the day's work, and started for home at six o'clock. He was brought in at seven o'clock. At the time of entrance he was insensible, had convulsive movement of limbs, labored and noisy respiration, flushed face, hot and dry skin; pupils not responsive to light. The pulse was 168, weak; the temperature 109.2° F. in the rectum. He was put into a bath at 76° F., which was reduced to 70° F. Five grains of quinine were given subcutaneously, and repeated in thirty minutes. There was an involuntary dejection. The bath lasted forty minutes, at the end of which time the temperature was 100.7° F. The same means for reaction were used as in the former case. At 8.10 o'clock the temperature was 96.2° F., a reduction of 13° F. in one hour and five minutes. At 8.30 o'clock the convulsive movements before mentioned had become so violent that two men held the patient on the bed with difficulty; he was partially etherized, after which there was no return. At 9.55 o'clock he vomited. In three and a quarter hours from the beginning of treatment he regained consciousness. At eleven o'clock the temperature was 100° F. Sponge baths were given as in the other case. The next morning he complained of headache, weakness, and aching of the limbs, and these were his only symptoms during convalescence. He was discharged, well, in seventeen days.

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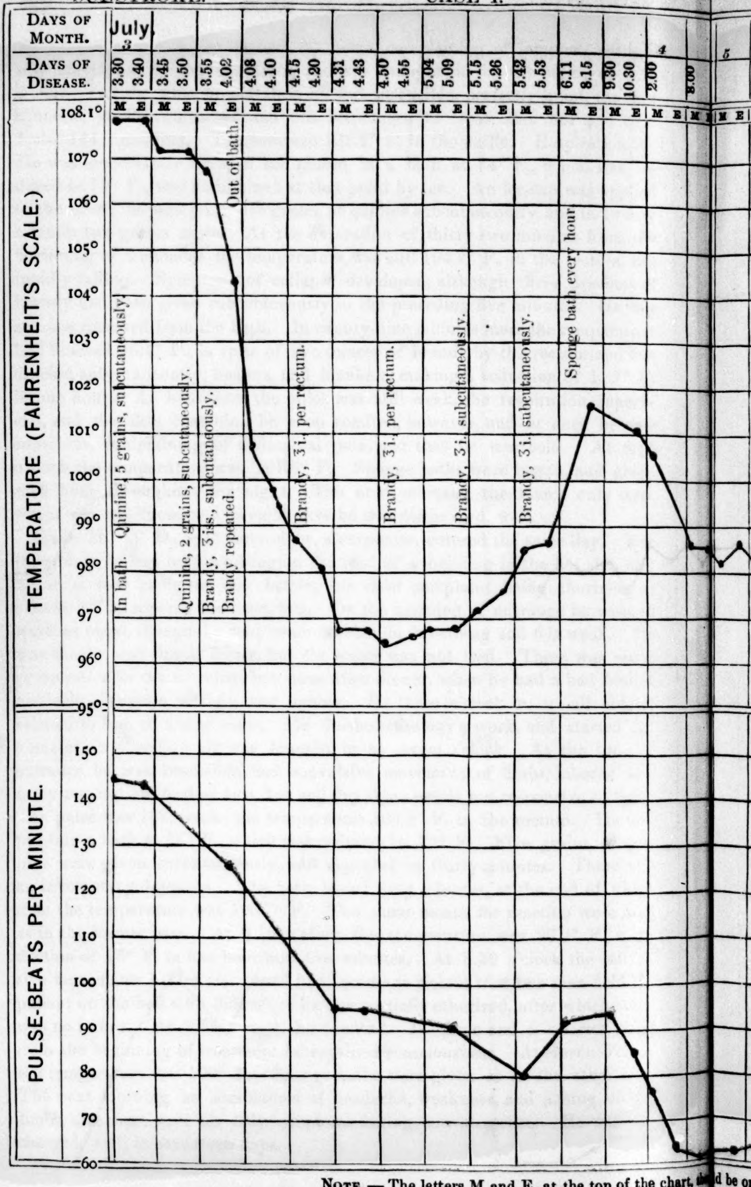
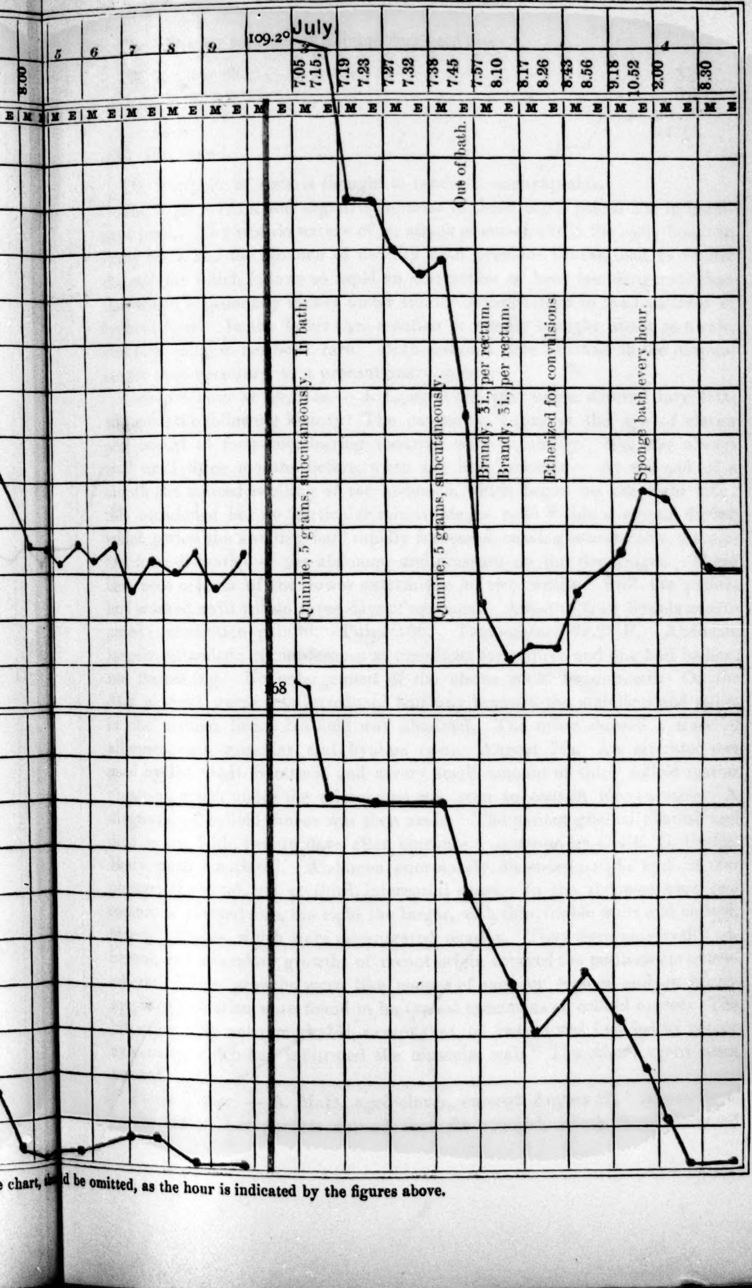
SUNSTROKE. CASE I.



NOTE. — The letters M and E, at the top of the chart, d be o

CASE II.



e chart, th d be omitted, as the hour is indicated by the figures above.

The following solution of quinine was used: —

℞	Quiniæ sulph.	ʒij.
	Acid lactic conc.	ʒij.
	Sodæ bisulphit	grs. iv.
	Aquæ	ad ℥i.
M.	♏iv. = gr. i.	

The bisulphite of soda is thought to render it unchangeable.

The hyperpyrexia and urgent symptoms in these cases placed life in imminent peril. The sthenic nature of an attack of sun-stroke in the early hours in many cases, and the absence of debility from previous illness, tend to render the collapse which follows so rapid an abstraction of heat less dangerous than that which occasionally occurs under similar circumstances in the treatment of typhoid fever. In the latter case reaction is readily brought about as a rule, and fatal collapse has been rare. Both patients were retained in the hospital longer than necessary, as a precautionary measure.

Colloid Cancer of Ovaries. — J. L., aged fifty-two, single, entered July 27th, and gave the following history: The catamenia began at the age of eleven and ceased at forty-one, having recurred with regularity. She was always well until three months before, when she had backache. At the end of a month she noticed swelling of the abdomen, which began on the right side; this occasioned her no particular inconvenience until within a month, during which period the swelling had rapidly increased, causing considerable discomfort from distention of the abdomen and pressure on the diaphragm. There had been œdema of the lower extremities for two weeks. Still the patient had worked until within three days of entrance. Appetite fair; bowels constipated; micturition painful. Pulse 100. Temperature 99.2° F. Abdomen largely distended; circumference at umbilicus forty-three and one half inches; not fluctuating. No enlargement of the uterus could be detected. On the 31st a small trocar was introduced half-way between the umbilicus and pubes in the median line. No fluid was obtained. The urine showed a trace of albumen, with granular and hyaline casts. August 7th. An aspirator was used by Dr. G. B. Shattuck, and a very small amount of thick colloid matter obtained, which under the microscope was seen to contain blood-vessels. A diagnosis of colloid cancer was then made. The patient gradually failed, and died on the 16th, twenty days after entrance. *Autopsy*, by Dr. E. G. Cutler. Body much emaciated. Abdomen enormously distended; right arch of diaphragm at second, left at third, intercostal space. In the abdomen were two tumors of unusual size, the right the larger, with thin, friable walls and colloid, bloody contents, which were degenerated ovaries. They were universally adherent, and secondary growths of recent origin covered the peritonæum everywhere. These growths were like masses of sago or tapioca, and on microscopic examination were found to be typical specimens of colloid cancer. The intestines were not remarkable, except that the cæcum was invaded by cancer externally, which had infiltrated the muscular wall. The other organs were normal.

Pelvic Tumor. — A. McD., aged eleven, entered August 23. About three weeks before, her parents noticed that she stooped, which they attributed to carrying a weight, but in a few days, on account of pain, they detected a swelling in the lower part of the abdomen, which was tender on pressure. Since then she had had occasional attacks of abdominal pain, and had lost color, flesh, and strength. Appetite good. Bowels regular. At the time of entrance the abdomen was somewhat distended by a hard mass as large as a cocoa-nut, situated *chiefly on the left side*, and apparently arising from within the pelvis. There was no fluctuation. The circumference at the umbilicus was twenty-seven inches. September 5th. An aspirator was used by Dr. Shattuck, but nothing was obtained. For a few days after this the pulse and temperature were high, and morphine was required to ease the pain. September 16th. The patient was taken home by her parents. From the father it has since been ascertained that there was progressive enlargement of the abdomen, attended with great loss of strength and extreme emaciation; that œdema of the lower extremities appeared only two days before death, which occurred in November. No autopsy.

This case is reported in connection with the preceding one as a case of probable cancer of the ovary in a young subject, although such large and rapid new growths may have their origin in the mesenteric glands or in the omentum. The tumor did not appear to extend into the left lumbar region, as it would have done had the kidney been the diseased organ. The malignant nature of the affection was indicated by its rapid course, — less than four months in both cases.

Cancer of Stomach. — A. V., aged fifty-two, entered July 31st, with a history of fourteen months' illness. He first began to suffer from occasional distress in the epigastric and left hypochondriac regions, which for ten months had been so constant and severe as to interfere with sleep. From the physician who was called in January it was ascertained that the urine then contained sugar but no albumen or casts, and that the blood showed fifty per cent. diminution of red corpuscles. Under treatment with dialyzed iron and a mild aperient, by May there had been a gain of twenty-five per cent. in red corpuscles, and by June it was found to be well up to the normal standard, but for a month before entrance he had failed rapidly. At the time of admission, in addition to the pain before spoken of, he complained of anorexia, constipation, and occasional nausea and vomiting. He had a peculiar ashy complexion. There was considerable emaciation, and tenderness at the epigastrium. Nothing worthy of note occurred till August 17th, when he had a tarry dejection. September 1st, dysentery began, which continued till death, on September 26th. The treatment consisted of tonics, stimulants, opiates to ease the pain, and as nourishing a diet as the patient could take. At the last all solid food caused distress, and usually vomiting. *Autopsy*, by Dr. Cutler. Organs generally anæmic. The stomach was filled with a sour-smelling, dark-colored fluid, in which floated small particles of food. There was an ulcerated mass of new growth about the size of a hand on the smaller curvature of the stomach, rather near the pyloric end. On section of the new growth numerous sago-like bodies were discovered in a network of connective tissue; the mass was cancerous. There were secondary deposits in the liver. The kidneys were cloudy in parts of the cortex. The large intestine from just below the cæcum was found to be the seat of an extensive ulceration, which had begun to cicatrize at the lower portion while it was progressing above. The other organs were healthy. Brain not examined.

This case was noticeable for the absence of a perceptible tumor at the epigastrium, owing to the situation of the growth. There was great pain, however, in that region. The vomitus was not characteristic. For an account of a similar case reported by Dr. Louis Starr, see Proceedings of the Philadelphia Pathological Society, vol. vii., page 17.

SHORT COMMUNICATIONS.

DR. JOSEPH L. STEVENS.

Dr. Joseph L. Stevens died quietly at his home in Castine, Maine, February 19, 1879, of pneumonia. He was born in Gloucester, Mass., in 1790, and was consequently in his eighty-ninth year at the time of his death. He was a graduate of one of the earliest classes of Phillips Academy, Andover, where he fitted for college. He graduated from Harvard in 1810, and from the medical school of that university in 1814. This same year he went as surgeon on the privateer Yankee. He attended his first course of medical lectures while still an undergraduate of the academical department of Harvard, — the lectures then being given at Cambridge. His second course was taken in Boston in 1814, in the upper room of a store on Washington Street. This was probably the first year that the lectures were given in Boston. He heard the first lecture given by Dr. John C. Warren, as well as many of those of the elder Dr. Warren.

Dr. Stevens practiced for two years in Trenton, Maine, and then, in March, 1819, settled in Castine. He was therefore a resident of that town for very nearly fifty-nine years. Although for ten years past, owing to his age and infirmities, his practice has been very limited, yet he cannot be said ever to have withdrawn entirely from practice. When Dr. Stevens settled in Castine the roads were few and poorly constructed, and he made his professional calls on horseback, often traveling across pastures and fording brooks. For forty years his practice was very extensive, extending over a radius of at least thirty miles. Wherever he was known he was recognized as a man of culture and refinement. He possessed an active, vigorous mind and a retentive memory. Although the claims of his profession, to which he was ardently attached, received his first attention, yet he was not neglectful of other studies, and kept up some acquaintance with the classics and belles-lettres. He was an excellent citizen, and a kind and considerate husband and father. Though in no sense a politician, he nevertheless took a great interest in national affairs, especially during the years of the late war, and never hesitated to give utterance to his convictions. In the practice of his profession Dr. Stevens not only gave an unusual degree of satisfaction to his patrons, but he was recognized by his *confrères* as possessing good powers of diagnosis and sound judgment. He made surgery somewhat of a specialty, and kept up his interest in this, as well as in medical matters, to the very last. When eighty-two years of age he performed an amputation of the thigh neatly, quickly, and successfully. He was at one time, if we mistake not, a member of the Massachusetts Medical Society. He was the first medical man in Hancock County to administer sulphuric ether. He was for many years a subscriber to the Journal, to the pages of which he sometimes offered his contributions. During the last year of his life he borrowed and read several new medical works, and a fortnight before his death he displayed a good deal of intelligent interest in regard to a case of aneurism of the thoracic aorta, about which he had been informed by the writer.

But far beyond any desire for pecuniary returns did Dr. Stevens cherish his profession. He had for it not only a truly scientific zeal, and a hearty detestation of any approach to quackery, but above all he loved it also for the opportunity it gave him of serving his fellowmen. As a sympathetic, whole-souled, kind-hearted, and generous, though an impetuous and sometimes irritable man, he will long be remembered. As an evidence of his kindness, it it is told of him that on one occasion he was called to attend a poor woman in child-bed, in midwinter, and found her alone, without any fire or sufficient covering. He at once deprived himself of all the garments he could possibly spare to cover her with, broke up the fence-rails for fuel, and stayed by her until she was out of immediate danger. During his absence he lost two or three paying patients, who were obliged to send for other physicians. He never refused a case if able to go, no matter who the patient or what the case might be.

His death, though not unexpected, greatly affected the community in which he lived. He will long be remembered not only by his townsmen, but by very many of his brother physicians. He leaves a wife and five children. The latter are all grown up and settled in life, one of them, Dr. George B. Stevens, residing in Gloucester, the place of his father's nativity.

A NEEDFUL CHANGE.

THE death of the late Surgeon-General Woodworth, of the marine hospital service, leaves that department without a head. This seems a favorable time to effect a transfer of that partially developed service to the navy department. Such a change would place it under the management of efficient naval medical officers who have had years of experience in medical and military treatment of sailors. Supposing it were not possible to transfer the service, medical officers of the navy should at least be placed in charge of the hospitals. The coast survey is under the management of the treasury department, yet every vessel is officered by line officers of the navy, and the efficiency of that service is due entirely to them. It might with justice be asked, What is to become of those medical officers now constituting the marine hospital service? They are upon exactly the same relative footing as the volunteer officers of the navy or the contract surgeons of the army. Those of the navy are to be mustered out by the 1st of July, with one year's pay. The same disposition should be made of these gentlemen. EFFICIENCY.

AN ACT

TO PREVENT THE INTRODUCTION OF INFECTIOUS OR CONTAGIOUS DISEASES INTO THE UNITED STATES, AND TO ESTABLISH A NATIONAL BOARD OF HEALTH.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be established a National Board of Health, to consist of seven members, to be appointed by the president, by and with the advice and consent of the senate, not more than one of whom shall be appointed from any one State, whose compensation, during the time when actually engaged in the performance of their duties under this act, shall be ten dollars per diem each and reasonable expenses; and of one medical officer of the army, one medical officer of the navy, one medical officer of the marine hospital service, and one officer from the department of justice, to be detailed by the secretaries of the several departments and the attorney-general respectively, and the officers so detailed shall receive no compensation. Said board shall meet in Washington within thirty days after the passage of this act, and in Washington or elsewhere from time to time upon notice from the president of the board, who is to be chosen by the members thereof, or upon its own adjournments, and shall frame all rules and regulations authorized or required by this act, and shall make or cause to be made such special examinations and investigations at any place or places within the United States or at foreign ports as they may deem best to aid in the execution of this act and the promotion of its objects.

SEC. 2. The duties of the National Board of Health shall be to obtain information upon all matters affecting the public health, to advise the several departments of the government, the executives of the several States, and the commissioners of the District of Columbia on all questions submitted by them, or whenever in the opinion of the board such advice may tend to the preservation and improvement of the public health.

SEC. 3. That the Board of Health, with the assistance of the Academy of Science, which is hereby requested and directed to coöperate with them for that purpose, shall report to Congress at its next session a full statement of its transactions, together with a plan for a national public health organization, which plan shall be prepared after consultation with the principal sanitary organizations and the sanitarians of the several States of the United

States, special attention being given to the subject of quarantine, both maritime and inland, and especially as to regulations which should be established between state or local systems of quarantine and a national quarantine system.

Sec. 4. The sum of fifty thousand dollars, or so much thereof as may be necessary, is hereby appropriated to pay the salaries and expenses of said board, and the further sum of five hundred thousand dollars, or so much thereof as may be found necessary, to carry out the purposes of this act.

Approved March 3, 1879.

THE INSANE.

Mr. Editor, — A criticism upon the Tremont Temple meeting appears in a recent number of the Journal, the personal part of which seems hardly in good taste. I am not responsible for having been undeservedly introduced by a friend as "a gentleman who distinguished himself in the trial of Captain Holm," but I am responsible for a statement of law made in a few remarks there. The *practice*, which has recently grown up, of sending private patients to state asylums was not alluded to, but I did state, and correctly, the *law* which regulates the commitment of pauper and private patients, as the writer of that article will see by referring to the act of 1862, chapter 223. I do not seek to avoid the responsibility for the article in the *Advertiser* of August 15th in relation to commitments, which was signed C. G. F., and which is the only article I have written for the press lately, nor a part of the responsibility for the public discussion of the subject of insanity and the need of further legislation. This course seemed to be the only one left. Public discussion seemed necessary. Year after year others had tried another way, but successive legislatures have declined to act. Nothing remained to the friends of this cause but to enlist the attention of the governor and legislature by public discussion and other means. They believed that an evil practice had grown up through the laxity of the laws. They of course held the medical profession in the highest estimation, but they thought that some members of it had been in some cases either too careless and obliging, or deficient in judgment or character, and that some additional safeguard should surround society. The authority vested in your profession was as great as the power of the Star Chamber; they could do more than confine people by means of an *opinion*. The only safeguard against an abuse was in your character and good judgment. Surely no one will deny that all men are liable to err in judgment, and every one must regret that there are black sheep in all the professions. The Journal is devoted only to the discussion of medical questions, I believe, but if you will have the kindness to insert this you will do an act of justice to people who in the conduct of a good cause may have erred in judgment, but have obeyed what they thought was the law of necessity. Perhaps they have done good in pointing out some of the evils of asylum treatment. Charles G. Fall.

[We did not state the facts regarding the committal of insane persons to asylums without being familiar with the law, or without having had eminent legal advice as to its interpretation. The statute provides that "any . . . . *may* commit," etc. Private patients and *town* paupers are constantly committed to state asylums without any action of the court; there is nothing in the law to make it illegal to do so, and there is no discrimination in the law between the various kinds of asylums. We have frequently pointed out the necessity for a change in our general treatment of the insane, but in saying that the Tremont Temple meeting has been productive of as much harm as good we express our opinion with regard to it in mild terms. — Editor.]

SUBPERIOSTEAL RESECTIONS.

Mr. Editor, — I perused with much interest Dr. Bradford's article on Subperiosteal Resection of the Tibia in the Journal for January 30th. In *Braithwaite's Retrospect* for January, 1862, an account is given of the removal of the entire tibia, resulting in a perfect limb in six months. This operation was in August, 1855, by M. Maisonneuve (Paris). M. Velpeau and other eminent French surgeons had advised amputation. The result was the most perfect of any that I have seen the account of; the articular portions of the bone only were not removed.

I aided in the removal of a humerus, except the lower articular extremity merely, just prior to the appearance of that number of *Braithwaite.* The patient was a lad sixteen years old, from Henry County, Ill. He was in Rock Island for the surgical advice of Dr. Farrell, who deemed an operation necessary. It was in December, 1861, or January, 1862. The bone was carious its entire length, including the head, but not the lower articular part, which, as I said, was not removed. It was enucleated, as it were, from its thickened periosteum. In less than three months the patient was driving a span of horses in the streets, using both hands quite well. I left for the East April 7, 1862, and noticing this young man in the car went over to him and examined the limb. He could swing it back and forth perfectly, elevate it a little, but the power of the deltoid seemed imperfect, and the round contour of the shoulder was gone. Dr. Truesdale subsequently advised me by letter that the young man gained power of elevation of the arm. I must think, however, that this function never could be fully restored. At the same date Dr. Truesdale had a case of compound fracture of the tibia, in which a section of it came out of about an inch in length, as I remember. My impression is that the fibula was not broken. I am quite sure Dr. Truesdale's letter states that the loss to the tibia was made up without the least deformity or lameness, — reproduced from the still healthy periosteum. I am not aware that Dr. Farrell's case of removal and restoration of the humerus ever found its way into print. He has a surgical reputation of wide extent in that section of the country, and well earned. If he chose to give us some of his experience it would be of no small benefit.

PAWTUCKET, R. I. Very truly yours, J. O. WHITNEY.

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REPORTED MORTALITY FOR THE WEEK ENDING MARCH 8, 1879.

Cities.	Population estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from				
				The Principal "Zymotic" Diseases.	Pneumonia.	Diphtheria and Croup.	Scarlet Fever.	Diarrhœal Diseases.
New York	1,085,000	555	26.67	22.34	11.53	5.23	10.81	1.98
Philadelphia	—	311	—	—	—	—	3.22	—
Brooklyn	564,400	230	23.78	17.83	12.17	4.78	9.56	—
St. Louis	—	108	—	8.33	12.96	0.92	—	1.84
Chicago	—	165	—	10.87	5.45	5.45	—	1.81
Baltimore	365,000	140	20.00	13.57	12.14	7.86	5.00	—
Boston	356,500	162	23.70	11.11	11.73	4.32	1.85	0.62
Cincinnati	—	—	—	—	—	—	—	—
District of Columbia	160,000	81	26.30	12.34	12.34	6.17	9.87	—
Pittsburgh	—	61	—	19.67	6.56	9.84	—	1.64
Milwaukee	—	42	—	19.05	14.29	9.53	—	—
Providence	101,000	37	19.06	18.92	18.92	8.11	8.11	—
New Haven	—	—	—	—	—	—	—	—
Charleston	—	21	—	4.76	14.28	—	—	—
Lowell	53,300	16	15.65	12.50	37.50	12.50	—	—
Worcester	52,500	21	20.85	9.52	9.52	9.52	—	—
Cambridge	51,400	22	22.31	22.73	4.55	9.09	9.09	—
Fall River	48,500	—	—	—	—	—	—	—
Lawrence	38,200	—	—	—	—	—	—	—
Lynn	34,000	13	19.94	15.38	—	15.38	—	—
Springfield	31,500	7	11.59	14.29	28.37	—	14.29	—
New Bedford	27,000	—	—	—	—	—	—	—
Salem	26,400	16	31.60	18.75	12.50	12.50	6.25	—
Somerville	23,350	4	8.93	25.00	—	—	—	25.00
Chelsea	20,800	7	17.55	28.57	—	14.28	14.28	—
Taunton	20,200	7	18.07	—	14.28	—	—	—
Holyoke	18,200	9	25.79	33.33	—	22.22	11.11	—
Gloucester	17,100	5	15.25	20.00	20.00	20.00	—	—
Newton	17,100	5	15.25	—	20.00	—	—	—
Haverhill	15,300	7	23.86	42.86	14.28	42.86	—	—
Newburyport	13,500	6	23.17	16.67	—	—	—	—
Fitchburg	12,500	4	16.68	—	—	—	—	—

Two thousand and sixty-two deaths were reported (excluding Cincinnati and New Haven): 293 from consumption, 210 from pneumonia, 123 from scarlet fever, 88 from bronchitis, 72 from diphtheria, 41 from croup, 36 from whooping-cough, 22 from typhoid fever, 19 from diarrhœal diseases, 14 from erysipelas, 10 from cerebro-spinal meningitis, one from measles, none from small-pox. The increase in the total mortality is slight; from scarlet fever and whooping-cough considerable; from cerebro-spinal meningitis, diphtheria and croup, and diarrhœal diseases a decided decrease; pulmonary diseases, erysipelas, and typhoid fever remain about the same. There is a marked decrease in fatality from pulmonary diseases in Providence, Philadelphia, Charleston, and somewhat in New York, and a decided increase in Boston and the District of Columbia.

From *bronchitis*, 41 deaths were reported in New York, 14 in Brooklyn, nine in Chicago and Pittsburgh, six in District of Columbia, four in St. Louis, two in Baltimore, one in Milwaukee, Providence, and Charleston. From *whooping-cough*, 17 in New York, six in Brooklyn, four in Cincinnati, three in District of Columbia, two in Boston and Milwaukee, one in Chicago. From *typhoid fever*, seven in Philadelphia, three in Boston, two in Brooklyn and Chicago, one in St. Louis, Baltimore, District of Columbia, Milwaukee, Providence, and Charleston. From *erysipelas*, four in New York and Pittsburgh, two in St. Louis, Chicago, and Boston. From *cerebro-spinal meningitis*, four in Cincinnati, two in St. Louis, one in New York, Chicago, Milwaukee, and Cambridge. From *measles*, one in Pittsburgh. There was one death from *malarial fever* in Baltimore and District of Columbia, one from *relapsing fever* in Baltimore, one from *trismus nascentium* in Charleston and Baltimore. In the District of Columbia the death-rate was 18.64 among the whites and 41.41 for the colored population. Nashville is quite free from zymotic diseases. In Cleveland diphtheria, scarlet fever, and pulmonary diseases prevail; in Pittsburgh measles on the "South Side;" in Buffalo scarlet fever and especially diphtheria; in Louisville pulmonary diseases; in San Francisco, diphtheria and pulmonary diseases; in New Orleans, pulmonary diseases, and to a moderate extent malarial fever. Small-pox is in Havana, and a few cases of yellow fever; the latter disease is reported to the marine hospital department as being absent from our Southern States. The returns from sixteen of the nineteen cities of Massachusetts, with a population of 763,550, showed a decreased mortality from diphtheria, croup, and cerebro-spinal meningitis; about the same from typhoid fever and diarrhœal diseases; increased from the other "zymotic" and from pulmonary diseases.

Sergeant Purssell's meteorological record for the week, in Boston, is as follows: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.			Rainfall. (Melted Snow.)	
	Daily Mean.	Daily Mean.	Minimum.	Maximum.	7 A. M.	2 P. M.	9 P. M.	Daily Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration in Hours.	Amount in Inches.
March 2	30.473	31	37	28	78	45	57	60	NW	NW	W	9	9	4	F	F	C	—	—
" 3	30.648	28	36	25	62	61	72	66	N	E	S	8	10	8	F	C	C	—	—
" 4	30.299	39	47	24	93	55	83	77	S	SW	SW	8	14	16	O	F	O	—	—
" 5	30.438	31	46	19	71	39	45	51	W	N	NW	9	20	14	F	F	C	—	—
" 6	30.216	25	35	12	73	100	89	87	N	S	S	7	12	6	F	S	S	9.5	.15
" 7	30.076	26	35	20	84	61	71	72	W	NW	N	14	28	17	C	F	C	—	—
" 8	30.372	25	33	15	75	48	54	59	N	E	O	11	5	0	F	C	C	—	—

	Barometer.	Thermometer.	Humidity, Saturation being 100.	Wind.	Rain.
Weekly Summary.	Mean 30.360 Max. 30.675 Min. 29.817 Range .858	Mean 29.6 Max. 47 Min. 12 Range 35	Mean 67.6 Max. 100 Min. 39 Range 61	Total miles traveled, 1933. Prevailing direction, S.	Total amt. .15 in. Duration, 9 hrs. 30 min.

Barometer corrected for temperature, elevation, and instrumental error.

Explanation of weather symbols: O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., snow; L. S., light snow; T., threatening.

Station: Latitude 42° 21′; longitude 71° 4′; height of instrument above the sea, 77.5.

For the week ending February 15th, in 149 German cities and towns, with a population estimated at 7,549,967, the death-rate was 26.4, a decrease of 0.2 from the previous week. For the empire, typhus fever alone of the "zymotic" diseases had increased; measles had lost its epidemic character, except in Frankfort-on-the-Main and Gladbach; scarlet fever was milder, except in Dantzic, Stettin, Ratisbon, and Hanover; the total mortality from diphtheria was a trifle less, although increased somewhat in Berlin, Breslau, Augsburg, Bremen, Dantzic, and Chemnitz; typhoid fever was more prevalent in Posen alone; diarrhœal diseases remained about the same; consumption was less fatal, and acute pulmonary diseases more so. Five hundred and fifty-four deaths were reported from consumption, 510 from acute pulmonary diseases, 156 from diphtheria and croup, 115 from diarrhœal diseases, 75 from scarlet fever, 64 from whooping-cough, 43 from typhoid fever, 42 from suicide, 32 from puerperal fever, 28 from measles, eight from typhus fever, none from cholera or small-pox. The death-rates ranged from 14.3 in Stuttgart to 39.5 in Augsburg; Dantzic 27.2; Kiel 20.8; Breslau 27.5; Munich 30.5; Dresden 22.2; Cassel 25.7; Erfurt 25.1; Berlin 25.8; Leipsic 19.6; Hamburg 24.3; Hanover 18.4; Bremen 21.5; Cologne 30.4; Frankfort-on-the-Main 25.1; Wiesbaden 25.5.

For the week ending February 22d, in the 20 English cities, having an estimated population of 7,269,976, the death-rate was 25.6, an increase of 0.5 from the previous week: in London 23.7; Portsmouth 16.6; Birmingham 22.8; Leicester 17.0; Liverpool 36.1; Manchester 39.4; Leeds 28.1. There were in all the cities 489 deaths from diseases of the respiratory organs, 139 from whooping-cough, 99 from scarlet fever, 38 from fever, 32 from diarrhœal diseases, 28 from measles, 17 from small-pox (all in London), and 15 from diphtheria.

Small-pox is still very prevalent in Dublin, Budapesth, Paris, Barcelona, and especially in St. Petersburg, decreasing in Vienna; a few cases are reported in Geneva, Warsaw, and Venice. The plague is reported as having disappeared, but a malignant form of typhus fever is reported in Russia and Turkey. Strict quarantine regulations are observed in the ports of the Mediterranean and in those countries having land communication with Turkey and Southern Russia. Efforts are making to improve the sanitary condition of the towns, especially in Eastern Europe. The German government have published elaborate regulations regarding quarantine and "disinfection."

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Books and Pamphlets Received. — Epitome of Skin Diseases, with Formulæ for Students and Practitioners. By Tilbury Fox, M. D., F. R. C. P., and T. C. Fox, M. B., B. A. (Cantab.) Second American Edition, enlarged and revised by the Authors. Philadelphia: Henry C. Lea. 1879. (From A. Williams & Co.)

Evolution and Human Anatomy. By Stanford E. Chaillé, A. M., M. D. (The Medical Record.) 1879.

Nineteenth Annual Report of Medical Superintendent of the State Asylum for Insane Criminals, Auburn, N. Y. Albany. 1879.

First Annual Report of the State Board of Health of the State of Connecticut. Hartford, Conn. 1879.

On the Elective Action and Small Doses of Medicine, with Illustrative Cases. By Thomas J. Mays, M. D. 1879. (New York Medical Journal.)

The Therapeutic Value of Ergot. By J. W. Compton, M. D. (Detroit Lancet.)

Changes in the Globular Richness of Human Blood. By E. G. Cutler, M. D., and E. H. Bradford, M. D., Boston. (Reprint from the Journal of Physiology.)